

MEDICATING CATTLE: BACK TO THE FUTURE

The past few years have brought many changes to the way producers look at their cattle and the beef products that go on to consumers. The industry-driven Quality Assurance programs have focused on reducing drug residues in beef cattle to almost zero. The Quality Assurance programs have also stimulated the development of many new beef products that utilize traditionally lower value parts of the carcass such as the chuck and the round. One of the outcomes of this process is that intramuscular injections in cattle are to be avoided whenever possible. These IM injections can damage the meat (all of the cuts have increased in value) by potentially making it tough or causing visible blemishes. The vaccine and pharmaceutical companies have responded by offering products that can be injected subcutaneously in the neck region, thus aiding this movement away from IM injections. This month we will explore what the future might hold and what are some of the changes we may need to adopt to medicate or vaccinate our cattle.

New products are being developed to by-pass the need for IM or Sub-Q injections. There are several vaccines under development that will be given orally. These include BVD vaccines and *Pasteurella* vaccines at the present, but could include a number of other vaccines in the near future. Many cattle diseases are naturally spread by the oral route; therefore, it makes sense to develop oral vaccines. The oral route for vaccine administration is used to a large degree in the poultry industry already. Intranasal vaccines for IBR and PI3 have been on the market for many years and have been proven safe and effective for cattle. New bolus products to prevent copper deficiency and selenium deficiency in cattle have been developed in recent years. Remember, the earliest internal parasite products (wormers) were all given orally. So the future may include going back to oral or intranasal administration of a number of cattle health products. This trend may create a few challenges for us as we work our cattle.

First, many cattle do not care to have their heads worked with. This means they have to be properly positioned in the squeeze chute. If the head and neck are too far in front of the head catch, the cattle have too much leverage and can resist restraint and administration of any product. If the head is too far back, they can't open their mouth. So proper positioning and chute design become important.

Cattle have a relatively long and narrow mouth. This means we must place oral products in the correct part of the mouth. Figures 1 and 2 illustrate that we need to direct materials down the center of the mouth. If we get too far off center the teeth come into play and the animal will bite down on the balling gun or other device and stop the administration of the product. When giving pills, pastes, or boluses the object must be swallowed by the cow. This means it must be delivered to the base of the tongue (Figure 3) where it stimulates the animal's swallowing reflex. If the object is deposited in front of the base

of the tongue the cattle will spit it out (often after they walk out of the chute). If the object is placed too far back it may obstruct the trachea (windpipe) or damage the soft palate (which can result in death in a few days time). The “secret” is to guide the object down the center of the mouth, go just past the base of the tongue (resistance stops when you reach the proper point) and deposit it there. The animal will then swallow automatically.

Other hints that can help include: (1) use Wesson oil or other kitchen oil to lubricate balling guns, boluses, and pills to make swallowing easier, (2) select the right size balling gun for the job (none of the balling guns are perfect for all needs), (3) give any pills first, so if the animal spits it up you know it (versus two minutes later in the corral).

The future may mean going back to oral administration of more cattle health products. Keeping a few things in mind when doing this job may help it go a little easier on you and your cattle.

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